

Pfiesteria

Human Health Risk	L
Ecological Risk	L
Socioeconomic Risk	L

Pfiesteria is a type of algae that occurs naturally in New Jersey coastal waters. Generally harmless, *Pfiesteria* can become toxic under specific environmental conditions, notably the presence of large schools of fish. *Pfiesteria* has been associated with fish kills in Maryland, Delaware, Virginia, and North Carolina, but there have been no confirmed reports of *Pfiesteria*-type fish kills in New Jersey waters. *Pfiesteria* is not a source of human illness through seafood consumption, but it can cause adverse effects in individuals who come in direct contact with toxic-stage *Pfiesteria* during an outbreak. While the toxic stage lasts only a few hours, toxic effects (e.g., fish kills) may persist for days or weeks afterward.

What's at risk?

There has never been a confirmed outbreak in New Jersey. Areas with large concentrations of fish (menhaden for example) where there is a potential for *Pfiesteria* outbreaks include the Navesink and Shrewsbury rivers in the Atlantic region and in estuaries along the shoreline of the Lower Delaware. Given the isolated and short-term nature of the organism's toxic stage, potential human exposure is very small—perhaps a few dozen individuals could become exposed.

What are the human health impacts in New Jersey?

Should an outbreak ever occur in New Jersey, the potential for human health impacts is likely to be very low, given the short duration and isolated nature of these events. Exposures in other states were limited to a few lab workers handling *Pfiesteria* cultures, and commercial fisherman who were exposed during fish kill events. These individuals experienced a wide range of symptoms, including lesions, respiratory problems, stomach distress, behavior changes, and memory loss.

What are the ecological impacts in New Jersey?

Under specific environmental conditions, such as high nutrient levels and the presence of large schools of fish, *Pfiesteria* populations may in-

crease or “bloom” and become toxic to fish, causing lesions that are often fatal. Of 32 locations sampled for the presence of the organism, it was found at only one site, the Tuckahoe River near Corbin City. There are no confirmed reports of *Pfiesteria*-type fish kills in New Jersey waters.

What are the socioeconomic impacts in New Jersey?

New Jersey is unlikely to experience a *Pfiesteria*-related fish kill. Even worst-case estimates yield a very low level of socioeconomic impact due to the short term, isolated nature of the problem.

What's being done?

New Jersey wastewater treatment approaches tend to reduce the potential for nutrient overload which is thought to be a contributing factor. Secondary treatment, along with discharge pipes that extend far offshore, help keep nutrient loads low. In the unlikely event of a *Pfiesteria*-related fish kill, the Departments of Health and Senior Services and Environmental Protection have a contingency plan for emergency response.